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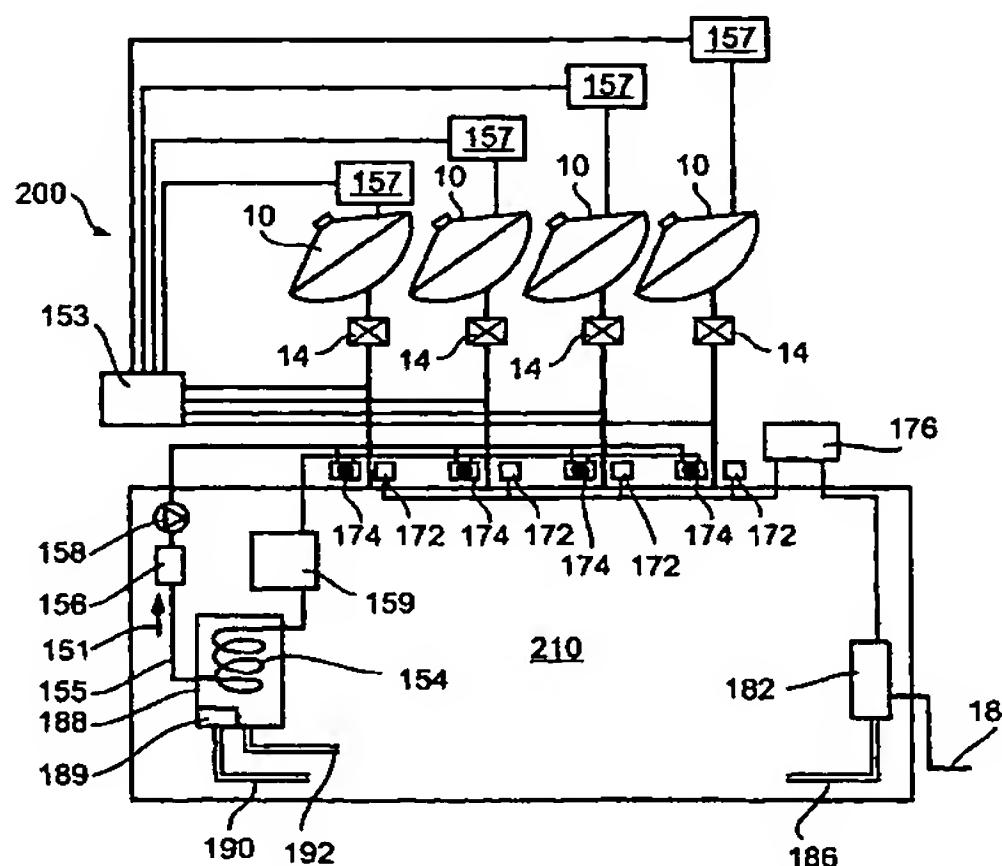
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(54) Title: SMALL-SCALE, CONCENTRATING, SOLAR CHP SYSTEM



(57) Abstract: A high-efficiency, small-scale, combined heat and power, concentrating solar energy system (200), designed specifically for residential and other relatively low-power applications, rendering it cost-effective and economically viable. Two-axis tracking of a dish-like reflector (10) of between 1 and 2 meters in aperture ensures very high concentrating ratios of between 200 and 8-suns or even higher. In consequence very high coolant outlet temperatures, of 120-180 degrees C may be reached at the outlet of the collector coolant, which may be oil, gas, or pressurized water. The high coolant temperatures are advantageous because they may be used for air-conditioning. The high concentration is advantageous because the efficiency of the photo voltaic cells is improved with higher concentration. The overall efficiency is greater than 60 %. Additionally, a simple but accurate drive, designed as a radio-dial drive (14), with substantially zero backlash, and substantially zero drive, is provided for driving the concentrating solar energy system. Preferably, two radio-dial drives are employed and tracking is performed along two axes, of an azimuth-elevation mount, a polar mount, or a cross mount.

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 126/569

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,192,583 A (HORTON) 11 March 1980 (11.02.1980), column 8 lines 12-59.	1-69
Y	US 4,440,150 A (KAEHLER) 03 April 1984 (03.04.1984), column 5 lines 1-68.	1-69
Y	US 5,148,012 A (CARTER) 15 September 1992 (15.09.1992), column 4 lines 11-55.	1-69

Further documents are listed in the continuation of Box C.

See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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